

REMARKS ON SOME SPECIES OF *BULIMULUS*, SECT. *DRYMLÆUS*,
AND DESCRIPTIONS OF NEW SPECIES OF LAND-SHELLS
FROM BOLIVIA, ECUADOR, AND THE U.S. OF COLOMBIA.

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PLATE VI.

AMONG the large number of specimens of Bulimulidae (principally belonging to the section *Drymæus*), which have reached me from the United States of Colombia during the last ten years, certain forms present so strong a resemblance one to another, that it becomes extremely difficult to determine whether they constitute distinct species, as held by some, or are merely varieties of one. Take, for instance, *Bulimulus felix*, Pfr., the typical form of which is figured in the Proc. Zool. Soc., 1861, t. xxxvii, fig. 2.

An examination of a long series of these shells shows that although in many instances the form and colour-markings of the individuals differ considerably, their general characters are the same, so we may fairly conclude that these differences are due to variation. There are many other analogous instances. If an extended series of examples of the following so-called species, *B. murrinus*, Reeve, *B. convexus*, Pfr., and *B. phryne*, Pfr., be examined, it will, I think, be manifest that any attempt to separate them would only end in confusion.

I propose, therefore, to reduce these three species to one, and to adopt the specific name of "*murrinus*" for all, it being the first in order of date, and given by Reeve, when describing the shell in the "Conch. Icon." (1848), pl. xliii, figs. 373 *a* and *b*. I would take fig. *a* as the type, and class the others as varieties.

On the other hand, there is in the British Museum a shell marked as a variety of *B. convexus*, which is, however, so different in character from that species that I describe the form as a new species, heading therewith the following series of descriptions:—

1. *BULIMULUS (DRYMLÆUS) PLICATO-LIRATUS*, n.sp. Pl. VI, Fig. 1.

Bul. testa ovato-fusiforme, basi compressa, carinata, umbilicata; anfractibus 7, convexis, suturis compressis, longitudinaliter rude albo-plicatis, vel liratis, fulva, zonis angustis albis duabus cingulata, apice nigro; columella reflexa, apertura oblongo-ovale, inferne late canaliculata, intus purpureo-fusca, bizonata, labro albo subexpanso et reflexo. Long. 37, diam. 15.5 mm.; apertura cum perist., longa 17, lata 11 mm.

Hab.—Bogotá.

2. *BULIMULUS (DRYMLÆUS) HIDALGOI*, n.sp. Pl. VI, Fig. 2.

Bul. testa ovato-fusiforme, compresse umbilicata, crassiuscula; anfractibus 7, convexis, levibus, vel sub lente lineis spiraliter incisis,

suturis impressis; alba, cæruleo-nigro longitudinaliter strigata; columella parum contorta et reflexa; apertura ovali, intus purpurascente, labro expanso, et reflexo, marginibus callo purpurascente junctis. Long. 39, diam. 13 mm.; apertura cum perist., longa 18, lata 12 mm.

Hab.—Ecuador.

This species bears a resemblance to both *B. felix*, Pfr., and *B. Membelinus*, Crosse, but differs from each in form and sculpture. Examples collected by the late Mr. Buckley during his travels in Ecuador are among those in the British Museum without a name.

3. *BULIMULUS (DRYMLÆUS) SMITHII*, n.sp. Pl. VI, Fig. 8.

Bul. testa cylindraceo-turrita, umbilicata; anfractibus 6, suturis impressis, laevibus, sub lente impresse transversim sculptis, striis in anfractibus apicalibus duobus subtilissime granulatis, ultimo oblique producto, livido fuscescente, irregulariter tæniato et undato, zonis tribus purpureo fuscis ornato, suprema maculis purpureis sagittatis notata, interrupta; columella purpurascente; apertura oblique ovata, labro pallide luteo, late reflexo, longit. totius $\frac{1}{2}$ aequante. Long. 29·5, diam. 15 mm.

Hab.—Bogotá.

This shell is also represented as an unnamed species in a drawer in the British Museum. I have named it after my esteemed friend Mr. Edgar A. Smith.

4. *BULIMULUS (DRYMLÆUS) ZICZAC*, n.sp. Pl. VI, Fig. 5.

Bul. testa ovato-conica, tenuicula, umbilicata, basi sub-angulatim producta, lutea, nigricante-fusca, conspicue undulata; anfractibus 6, convexis, sub lente minute striatis; columella plano-reflexa, apertura ampla, effusa, intus violaceo-purpurea, labro reflexo. Long. 28, diam. 15 mm.; apertura cum perist., longa 15, lata 11 mm.

Hab.—Valley of the R. Cauca, Colombia.

This form has been lately received; the colour-markings remind one somewhat of those on *B. undulatus*, Guild., from the Island of St. Vincent, but its form is distinct.

5. *BULIMULUS (DRYMLÆUS) CAUCAENSIS*, n.sp. Pl. VI, Fig. 3.

Bul. testa fusiforme-turrita, anguste umbilicata, albida, zonis tribus nigricantibus interruptis, albo punctatis; anfractibus 6, convexis, suturis impressis, longitudinaliter plicato-striatis, columella parum contorta et reflexa, apertura ampla, intus purpurascente, albo bifasciata, labro parum reflexo, albo, marginibus callo purpurascente junctis. Long. 35, diam. 16 mm.; apertura cum perist., longa 17, lata 11 mm.

Hab.—Valley of the R. Cauca, Colombia.

Another new species received with the last, and differing from any hitherto discovered, both in form and colour-markings.

6. *BULIMULUS (DRYMLEUS) MALLEATUS*, n.sp. Pl. VI, Fig. 7.

Bul. testa conico-ovata, solidiuscula, vix umbilicata; anfractibus 5, ultimo ad suturam crenato, peculiariter corrugato, transversim obscure striato; columella callosa, apertura intus albida, ovali, basi partim bisecta, marginibus callo luteo junctis, alba, cinereo-fuscescente varie strigata, labro roseo. Long. 34, diam. 15 mm.; apertura intus longa 14, lata 6 mm.

Hab.—La Paz, Bolivia, 3,600 metres.

A beautiful and interesting shell described from a single specimen. The curious malleation of the surface is very peculiar, and unique, I believe, in shells belonging to this section.

7. *BULIMULUS (DRYMLEUS) LUCIDUS*, n.sp. Pl. VI, Fig. 4.

Bul. testa ovata, tenui, imperforata, anfractibus 5 laevibus, nitidis, sub lente impresse transversim sculptis, apicalibus duobus sublitissime granulatis; alba, pura, nigricante-castaneo longitudinaliter strigata, columella breviter reflexa, apertura ampla, labro simplice parum expanso. Long. 19, diam. 11 mm.

Hab.—Ecuador (Buckley's Coll.).

This and the following species were collected by the late Mr. Buckley in Ecuador, and although they have been for many years in my collection, to the best of my knowledge they have never been described.

8. *BULIMULUS (DRYMLEUS) TIGRINUS*, n.sp. Pl. VI, Fig. 6.

Bul. testa pyramidato-oblonga, tenui, ampliter umbilicata, anfractibus 6, subinflatis, transversim minute inciso-striatis, columella reflexa, labro simplici, expanso, pellucido; alba, lineis strigisque fuscis, longitudinaliter picta; apertura ovata. Long. 21, diam. 10 mm.

Hab.—Ecuador (Buckley's Coll.).

9. *STENOZYRA (SPIRAXIS) VIRESSENS*, n.sp. Pl. VI, Fig. 10.

St. testa oblongo-turrita, tenuissima, pellucida, nitida; anfractibus 8, convexiusculis, suturis impressis, longitudinaliter creberrime elevato-striatis, columella pallida, reflexa, labro simplici, acuto, epidermide tenui virescente, apertura sub-elongata, tertiam partem longitudinalis testae aequante. Long. 37, diam. 12 mm.; apertura longa 14, lata 5.5 mm.

Hab.—Valley of the R. Cauca, Colombia.

This shell has been lately received by me, and appears to be quite distinct from any hitherto known, although it must occur plentifully in the district whence it came, judging from the number of specimens (mostly imperfect) which have come to hand.

10. *CYCLOPHORUS ROSENBERGI*, n.sp. Pl. VI, Fig. 9.

Cycl. testa ampliter umbilicata, orbiculari-depressa, superne ustulato-castanea, inferne luteo-castanea, spira conico-depressa, vertice laevi,

anfractibus 5, juxta suturas planatis, superne tumide plicato-corrugatis, deinde rotundatis, spiraliter tenuiter liratis, anfractu ultimo ad peripheriam obtuse angulato, circa umbilicum laevi, apertura oblique circulari, peristome simplice, ad suturam profunde sinuata; operculo corneo, aretispirato, ad suturas et peripheriam laciniato. Diam. maj. 32, min. 25 mm.; alt. 20 mm.

Hab.—Cachabi, Ecuador.

A very interesting shell, distinguished from any other species of this genus, in that it has at the juncture of the aperture and the last whorl a deep sinuation, similar in character to that of *Pterocyclus*; the upper surface of the shell resembles that of *C. Vesconesi*, also from Ecuador, and described by M. Jousseaume in *Le Naturaliste* for November, 1897, but it differs in the form of the umbilicus as well as in the sinuation, which forms a peculiar feature in the new species. I have much pleasure in naming it after Mr. Rosenberg, its discoverer.

11. STROPHOCHEILUS (EURYTUS) SUB-IRRORATUS, n.sp. Fig. II.

St. testa acuminato-oblonga, medio ventricosa, imperforata; anfractibus 6, sub lente striis subtilissimis impressis spiralibus sculptis,

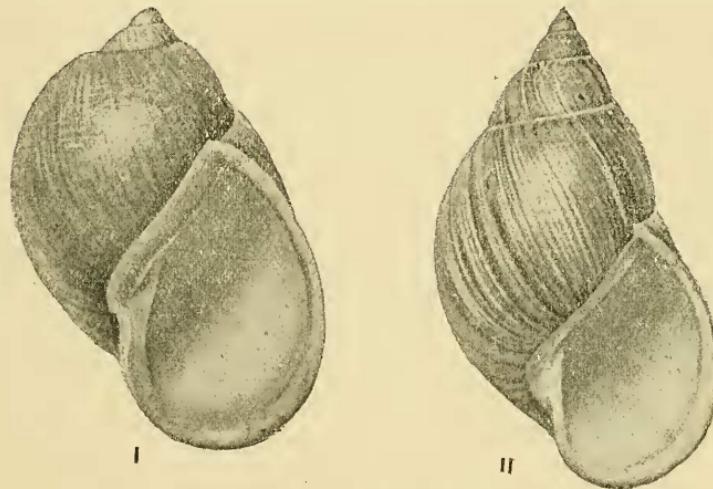


FIG. I.—*Strophocheilus doliarinus*, n.sp.
,, II.—*S. sub-irroratus*, n.sp.

infra suturam tenuiter plicatis, columella simplici, castaneo-purpurea; cinereo-fusco longitudinaliter strigata; columella cærulescente-alba, labro reflexo, incarnato-roseo, apertura iridescente, lilacea. Long. 63, diam. 33 mm.; apertura cum perist., longa 34, lata 22 mm.

Hab.—Paramba, Ecuador.

This species presents a general resemblance in form to *S. irroratus*, Rve., but differs from it in the absence of the raised striae which cover that shell and the peculiar crenulation beneath its sutures.

12. STROPHOCHEILUS (EURYTUS) DOLARIUS, n.sp. Fig. I.

St. testa ovata, umbilicata, crassiuscula, ventricosissima; anfractibus 5, undique minute granulatis, transversim creberimc striatis, striis rugosis et minute undulatis, ad suturas subtiliter plicatis, anfractu ultimo peramplo, inflato, oblique descendente, columella sub-contorta, superne callosa, labro reflexo; fumeo-castanea; apertura et peritremate purpurascente-lilaceis. Long. 58, diam. 41 mm.; apertura longa 40, lata 26 mm.

Hab.—Paramba, Ecuador.

This shell, while it approaches in its character to both *S. gibbonius*, Lea, and *S. castaneus*, Pfr., differs from them in form and sculpture.

EXPLANATION OF PLATE VI.

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| FIG. 1. | Bulimus plicato-liratus, n.sp. |
| ,, 2. | Hidalgoi, n.sp. |
| ,, 3. | Caucaensis, n.sp. |
| ,, 4. | lucidus, n.sp. |
| ,, 5. | ziezae, n.sp. |
| ,, 6. | tigrinus, n.sp. |
| ,, 7. | malleatus, n.sp. |
| ,, 8. | Smithii, n.sp. |
| ,, 9. | Cyclophorus Rosenbergi, n.sp. |
| ,, 10. | Stenogyra virescens, n.sp. |